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(54) Title: Toggle Catch for Cupboard Doors

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P 2684/78

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Claims

1. Toggle catch for cupboard doors, said toggle catch comprising two levers, which are articulated together and form a common joint, and are provided with a latching mechanism for the open position and the outer ends of which are each articulated to a cupboard-wall sided and a cupboard-door sided screw-down element, said toggle catch being characterized in that another latching mechanism is provided on the levers (3, 4) for securing the closed position of the cupboard door.
  
2. Toggle catch according to Claim 1 characterized in that the two levers (3, 4) and screw-down elements (5, 7) are designed as plastic parts, which can be plugged together, and that two latching seats (45, 47), the openings of which are oriented toward each other, are integrally molded on one lever (4) in the region of the common joint, while the other lever (3) is provided with a single latching projection (33) assigned to both the latching seats.

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Patent application

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Toggle Catch for Cupboard Doors

The present invention relates to a toggle catch for cupboard doors, said toggle catch comprising two levers, which are articulated together and form a common joint, and are provided with a latching mechanism for the open position and the outer ends of which are each articulated to a cupboard-wall sided and a cupboard-door sided screw down element.

In many cupboards, e.g. built-in cupboards of trailers, there is a requirement for articulated doors to lie firmly against the furniture carcass in the closed state of the doors. For securing the closed position of the doors, sash fasteners, magnetic door latches, spring-loaded latches and the like are generally provided, which have to be produced and mounted in addition to the toggle catch.

The object underlying the invention is to provide a toggle catch for cupboard doors, which toggle catch by itself secures the closed position of the door and thus renders unnecessary the use of additional locking devices.

This object is achieved according to the invention by providing an additional latching mechanism on the levers of the toggle catch for securing the closed position of the cupboard door. This latching mechanism locks the two levers in the closed position of the door in such a way that an opening action of the door requires the application of a distinct force overcoming the latching mechanism.

According to a preferred embodiment of the invention, the two levers and screw-down elements are designed as pluggable plastic parts and two latching seats, the openings of which are oriented toward each other, are integrally molded in the region of the common joint on one lever, while the other lever is provided with a single latching projection assigned to both the latching seats.

A toggle catch of this design is very inexpensive in terms of production and assembly and the additional molding of a latching seat for securing the closed position including the latching projection, which is already required for the open position, does not add to the production costs of the toggle catch. The toggle

catch performs another function, thereby eliminating the costs for separate closing mechanisms.

An exemplary embodiment of the toggle catch suggested by the present invention is illustrated in the drawings, in which:

Fig. 1 shows a lateral view of the toggle catch in the completely open state of the door,

Fig. 2 shows a lateral view of the toggle catch in the closed stated of the door,

Fig. 3 shows a section taken along line III-III marked in Fig. 1,

Fig. 4 shows a section taken along line IV-IV marked in Fig. 1, and

Fig. 5 shows a perspective view of the door-sided end of the toggle catch.

Fig. 1 shows the left sidewall with the cover plate of a cupboard 1 and a completely opened door 2, which is articulated on the top to the cupboard by means of a hinge 12. A toggle catch, which has the basic shape of an elbow lever composed of the lever 3 articulated on

the cupboard side and the lever 4 articulated on the door side and which is connected to the left sidewall of the cupboard and the door, is used for securing the open position of the door. The levers 3 and 4 designed substantially as flat, broad strips each have sleeves 31, 41 at one end, which sleeves can be plugged into each other in the axial direction, and the outer sleeve 41 comprises a latching groove 42, which receives a latching bead 32 provided on the outer casing of the sleeve 31. The levers 3 and 4 are made of a dimensionally stable, resilient plastic, which permits both sleeves 31 and 41 to be pressed into each other in a locking manner.

On the cupboard-sided end, the lever 3 is provided with a bore, which serves for receiving a cupboard-sided screw-down element 5. This screw-down element 5 consists of a flanged bushing 51, which is inserted into the bore of the lever 3, and a cap-like bushing 52, which is fitted on the inserted end and is bordered by the lever 3. The bore of the bushings 51, 52 serves for receiving a countersunk screw 6, which is to be screwed into the sidewall of the cupboard. The length of the two bushings 51, 52 is variably selected in such a way taking into account the displaced position of the levers 3 and 4 that the fixing screw 6 can be inserted from either end of the bore of the bushings 51, 52 and the toggle catch is accordingly suitable

for being fixed to the right and left sidewalls of the cupboard.

The bearing end of the door-sided lever 4 supports integrally molded, vertically protruding joint pins 43, 44. The door-sided screw-down element 7 is composed of a screw-on plate 71, on which four projections are integrally molded such that they are distributed on the corners of a rectangle and receive the lever 4 between themselves. The two pairs of projections 72, 73 and 74, 75 each located on either side of the lever 4 are designed as latching seats and pivot bearings for the joint pins 43 and 44. The screw-down element 7 in turn consists of dimensionally stable, resilient plastic, which ensures that the joint pins 43, 44 are introduced in a locking manner and held securely in the latching seats 72/73 and 74/75.

When opening the cupboard door, the lever 3 is swiveled about its cupboard-sided joint in the direction of the arrow 8, while the lever 4 is swiveled about the joint formed by the two sleeves 31, 41 in the direction of the arrow 9 so that the elbow levers assume an approximately stretched position in the open state of the cupboard door. For securing the open state of the door, a latching seat 46 composed of a resilient, undercut tongue 45 is provided on the outer

wall of the sleeve 41. A latching pin 33 integrally molded on the lever 3 snaps in place in the latching seat 46.

When closing the door 2, the lever 3 is swiveled about its cupboard-sided joint against the direction of the arrow 8 while the lever 4 is swiveled against the direction of the arrow 9. In the closed state, the cupboard-sided joint and the door-sided joint draw close to each other. An additional latching seat 47 integrally molded on the outer wall of the sleeve 41 and composed of an undercut tongue 48 receives the latching pin 33 integrally molded on the lever 3, thereby securing the closed state of the door 2. For this purpose, the latching seats 46, 47 are located at equal distance from the elbow joint axis of the toggle catch and their openings are oriented toward each other. The spring force of the tongue 48 is dimensioned in such a way it can be overcome by applying the same force that is required for overcoming conventional flap closure-magnetic door latches.

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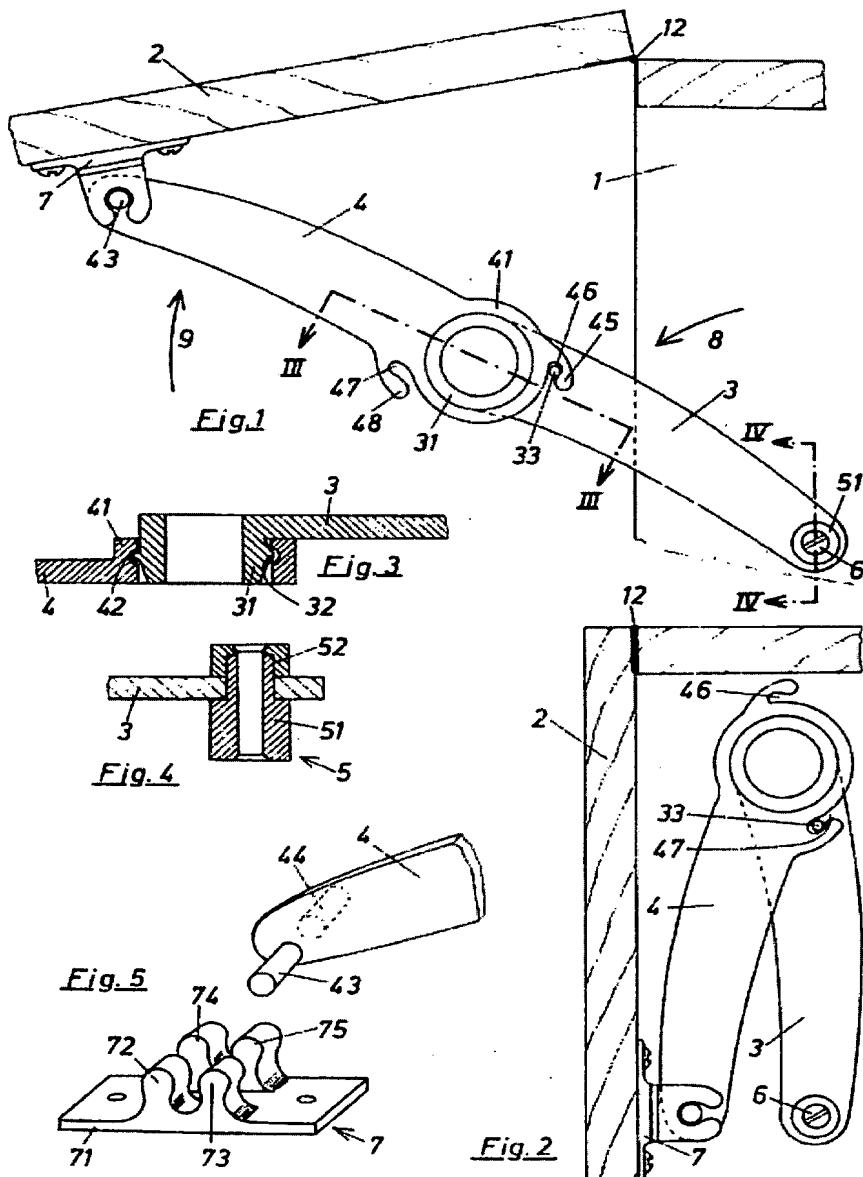
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